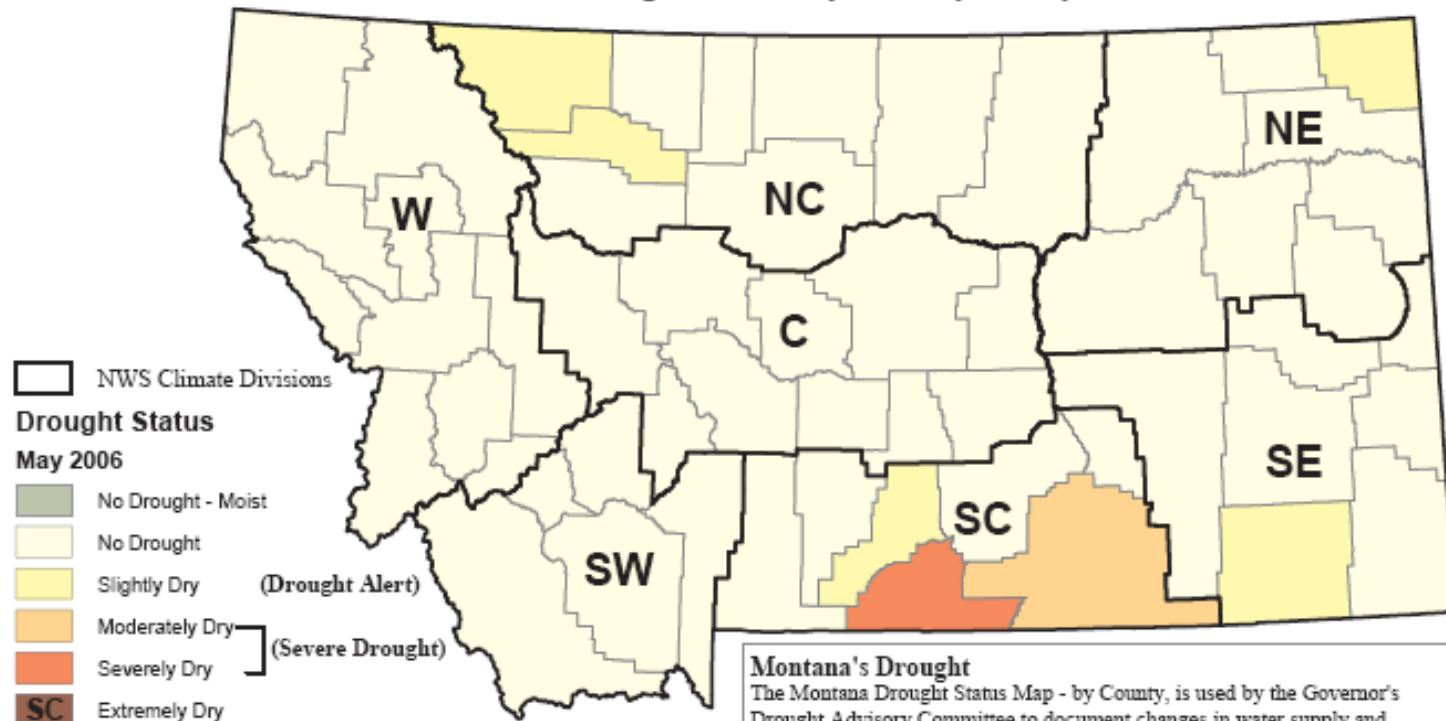


Montana Drought Status - May

Montana Drought Status by County - May 17, 2006



Drought Alert - Governor's Drought Advisory Committee strongly encourages local officials to convene local drought committees.

Severe Drought - Local officials should have local drought planning efforts underway or should reconvene the local drought committee at the earliest opportunity.

For recommended responses, see the Drought Response Plan.



<http://nris.state.mt.us/drought/>

Montana's Drought

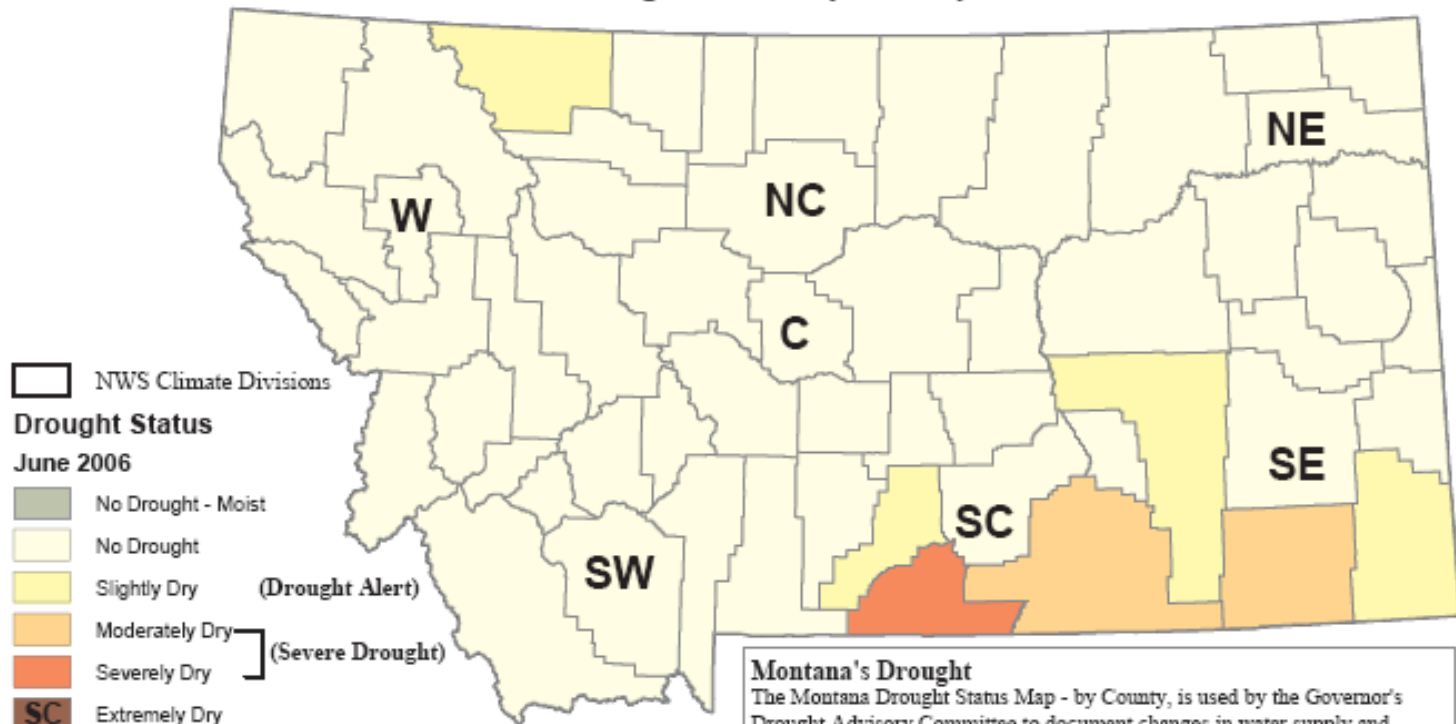
The Montana Drought Status Map - by County, is used by the Governor's Drought Advisory Committee to document changes in water supply and moisture conditions on a monthly basis and to alert counties so timely responses are possible. The descriptive categories of the Drought Status map correspond with known and anticipated levels of economic hardship on water uses and moisture dependence due to drought. Recovery from up to six consecutive years of severe drought conditions continues across large areas of Montana. High temperatures, declining streamflow, and wildfire are common in any given summer in Montana and do not necessarily indicate the presence of drought.

For more information regarding the determination of the drought status or the activities of the Drought Advisory Committee visit:

<http://www.dnrc.state.mt.us/Drought/Index.html>

Montana Drought Status - June

Montana Drought Status by County - June 13, 2006



Drought Alert - Governor's Drought Advisory Committee strongly encourages local officials to convene local drought committees.

Severe Drought - Local officials should have local drought planning efforts underway or should reconvene the local drought committee at the earliest opportunity.

For recommended responses, see the Drought Response Plan.



<http://nrinfo.state.mt.us/drought/>

Montana's Drought

The Montana Drought Status Map - by County, is used by the Governor's Drought Advisory Committee to document changes in water supply and moisture conditions on a monthly basis and to alert counties so timely responses are possible. The descriptive categories of the Drought Status map correspond with known and anticipated levels of economic hardship on water uses and moisture dependence due to drought. Recovery from up to six consecutive years of severe drought conditions continues across large areas of Montana. High temperatures, declining streamflow, and wildfire are common in any given summer in Montana and do not necessarily indicate the presence of drought.

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Governor's Drought Advisory Committee Meeting

June 15, 2006

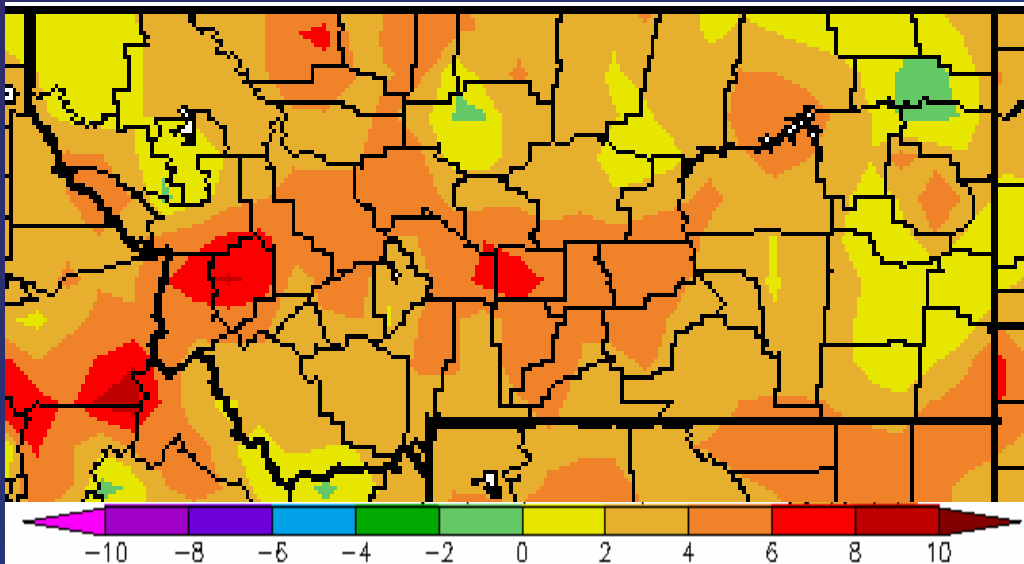
National Weather Service

Gina Loss



Average Temperature

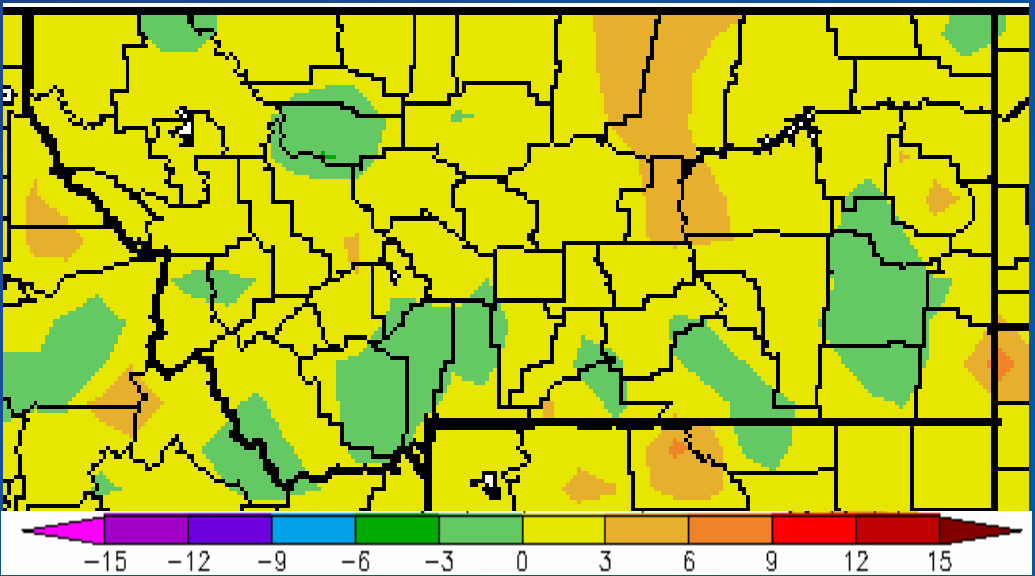
May 2006



- **Highs** – Near to above average
 - *Large areas 2 to 6 degrees above normal*
 - *Isolated areas 6 to 8 degrees above normal*
- **Lows** – Near average
 - *Generally with 3 degrees of normal*
- **April** – Near to above average

**High
Temperatures**

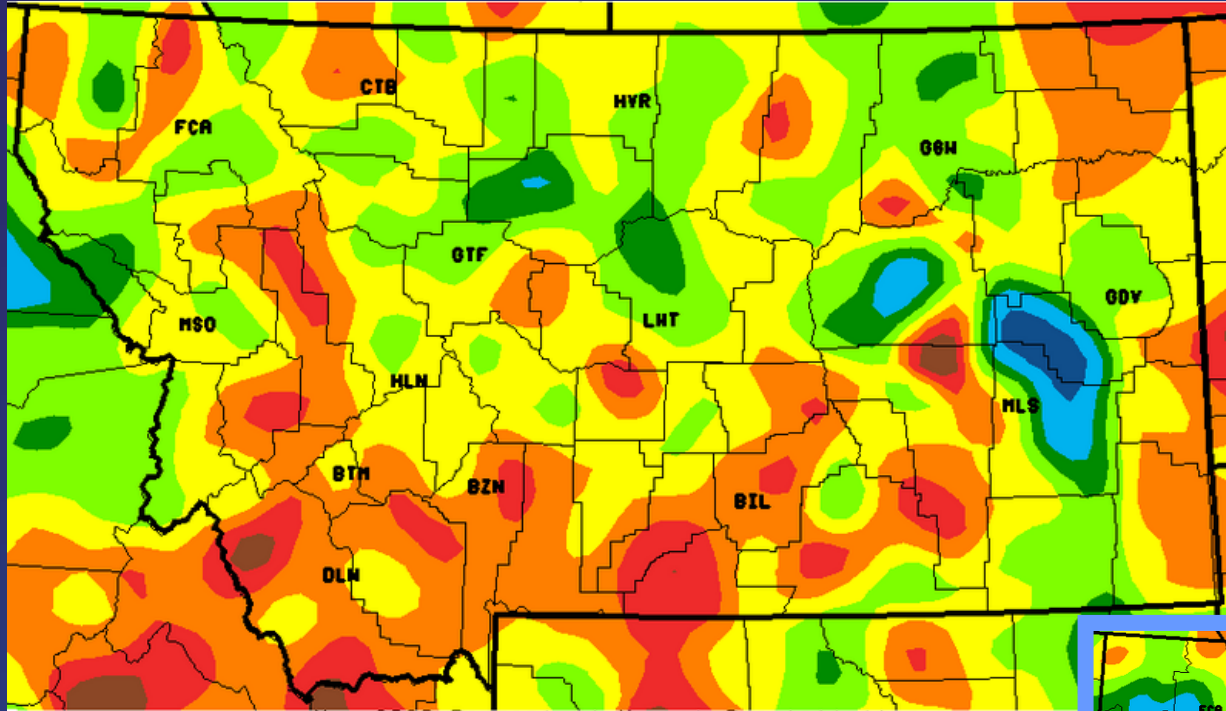
**Low
Temperatures**





Percent of Normal Precipitation

May 2006



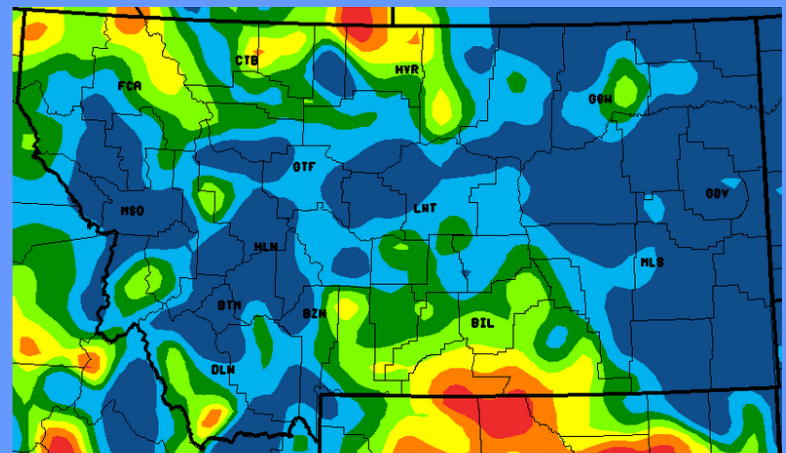
May 2006 Percent of Normal Precipitation
Period of Normal: 1971-2000

20 40 60 85 115 150 200

NOTE: Data used to generate this image are
PROVISIONAL AND SUBJECT TO CHANGE.

<http://www.wrh.noaa.gov>

- Most of Montana below to well below normal
 - Only small, isolated areas above normal
- Follows wet April



April 2006 Percent of Normal Precipitation
Period of Normal: 1971-2000

20 40 60 85 115 150 200

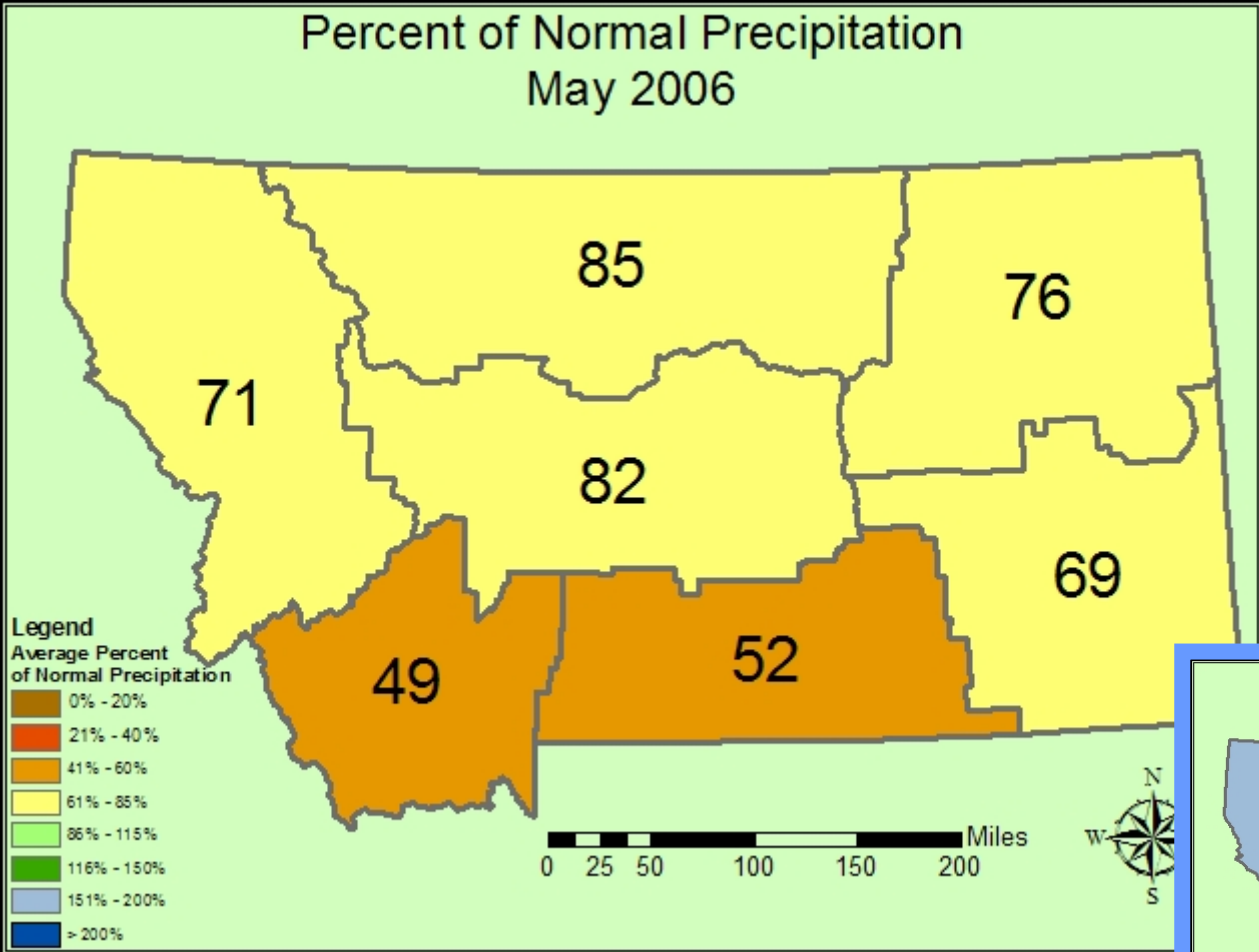
NOTE: Data used to generate this image are
PROVISIONAL AND SUBJECT TO CHANGE.

April 2006

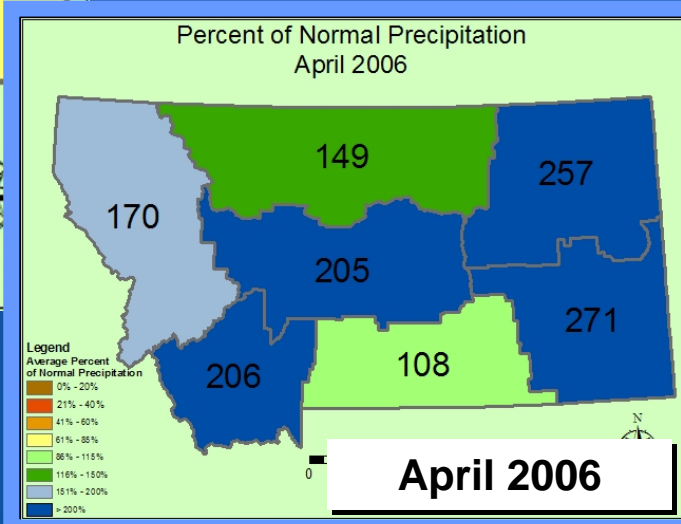


Percent of Normal Precipitation

By Climate Division ~ May 2006



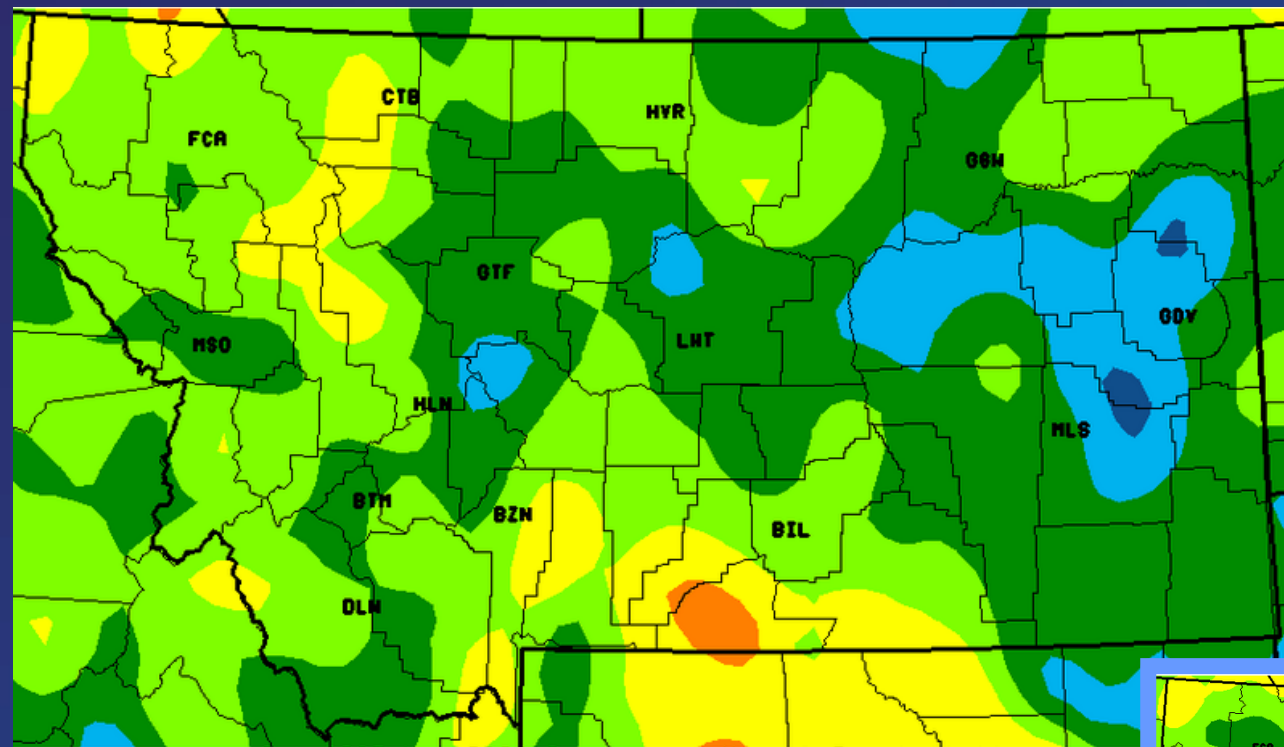
- Five divisions below normal
 - West
 - North central
 - Central
 - Northeast
 - Southeast
- Two divisions well below normal
 - Southwest
 - South central





Percent of Normal Precipitation

Water Year 2006



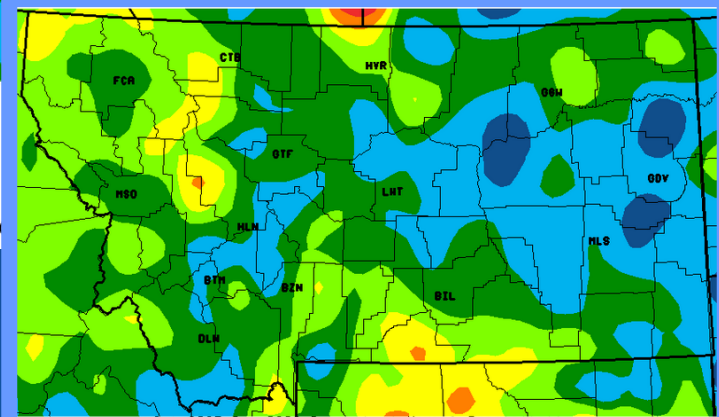
Oct 2005-May 2006 Percent of Normal Precipitation
Period of Normal: 1971-2000

20 40 60 85 115 150 200

NOTE: Data used to generate this image are
PROVISIONAL AND SUBJECT TO CHANGE.

<http://www.wrh.noaa.gov>

- October -- May
- Most of Montana still at least near normal
 - Large area above to well above normal
- Only isolated areas below normal



Oct 2005-Apr 2006 Percent of Normal Precipitation
Period of Normal: 1971-2000

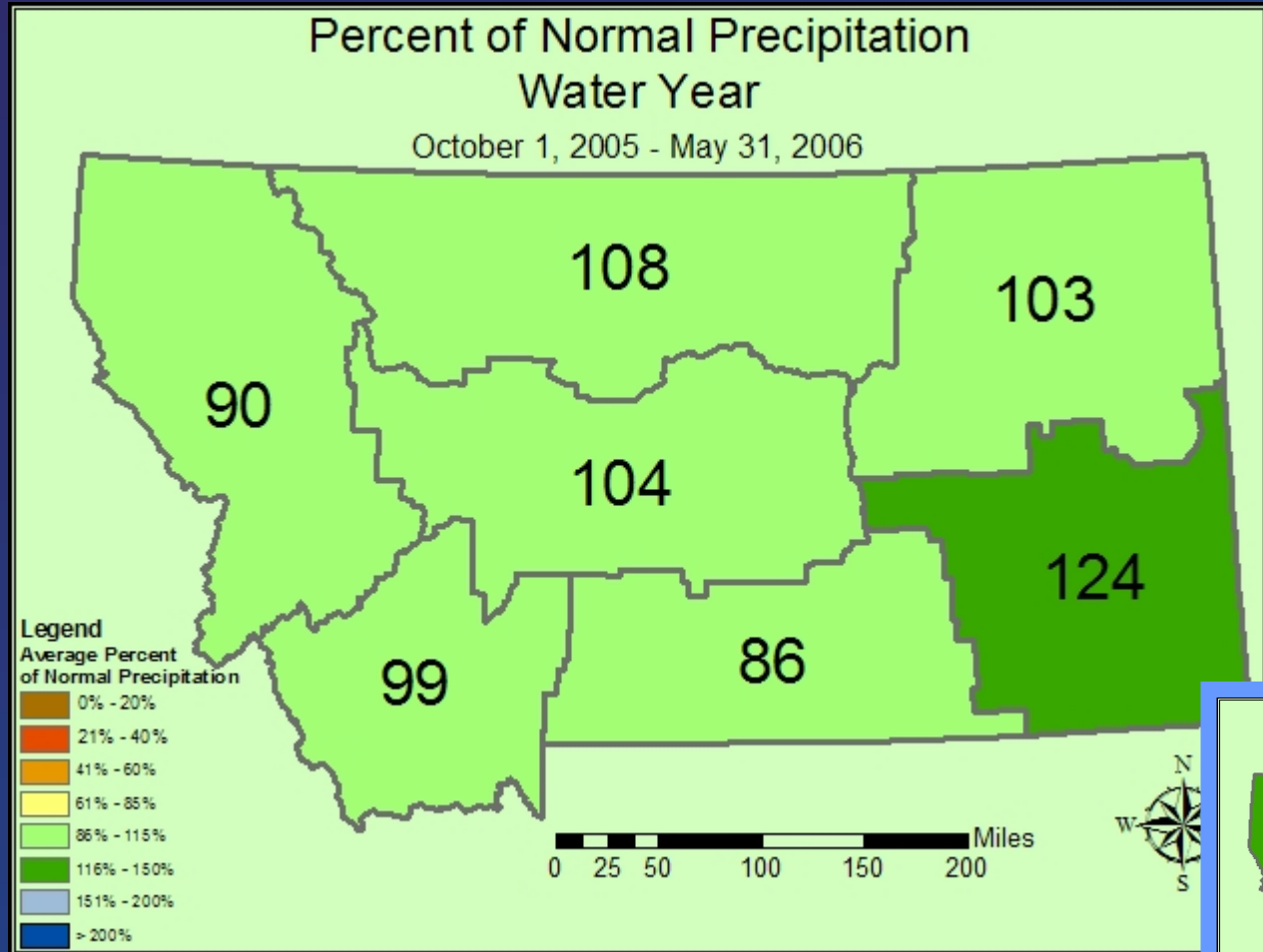
20 40 60 85 115 150

NOTE: Data used to generate this image are
PROVISIONAL AND SUBJECT TO CHANGE.

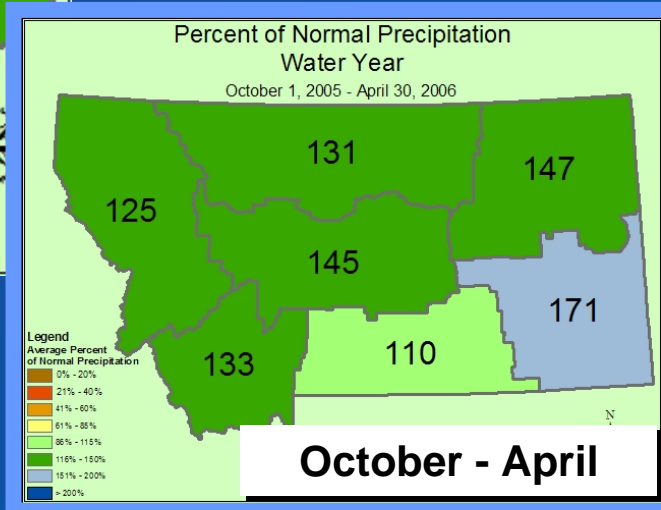
October - April



Percent of Normal Precipitation By Climate Division ~ Water Year 2006



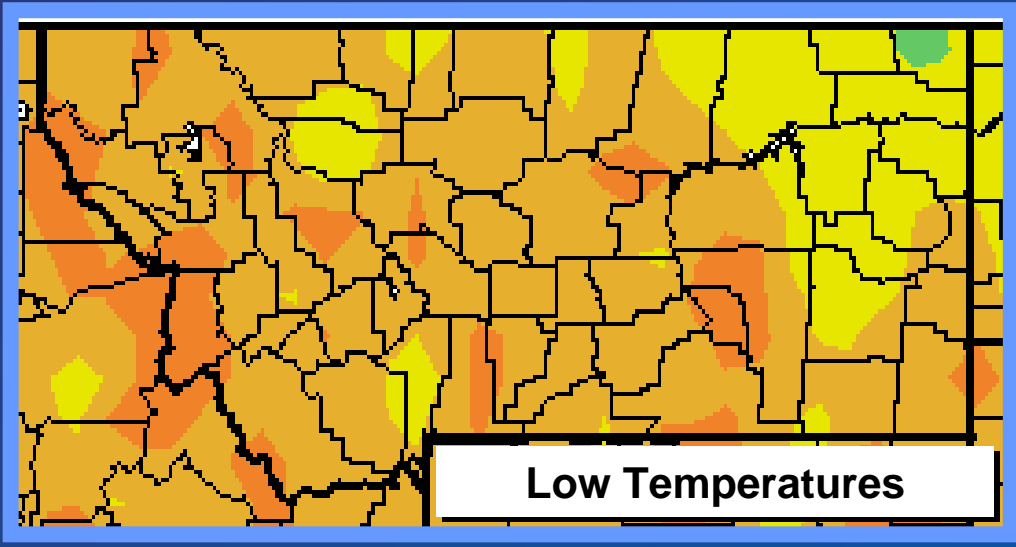
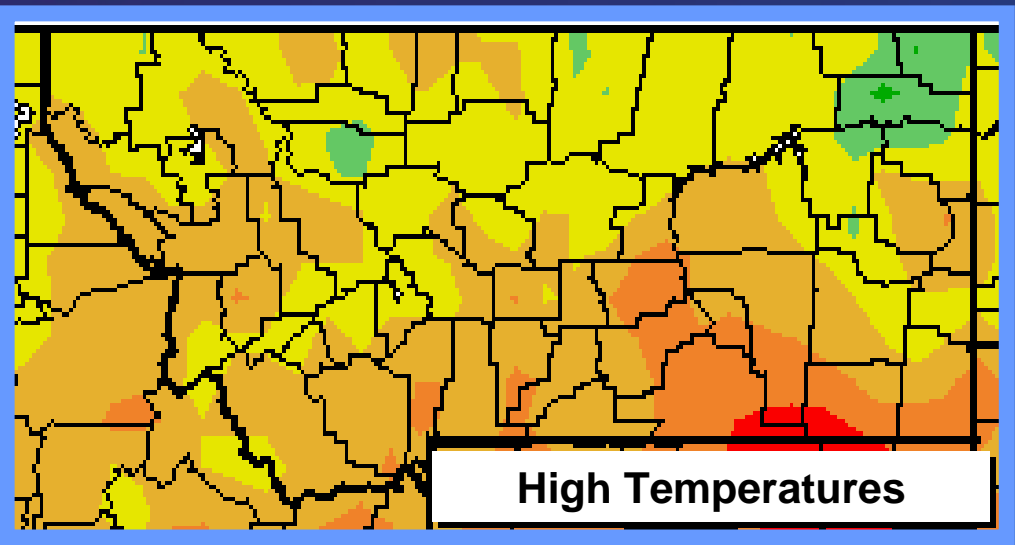
- October – May
- Seven divisions near normal
 - West
 - Southwest
 - North central
 - Central
 - South central
 - Northeast
- One division above normal
 - Southeast





Departure from Average Temperature

June 1 – 13

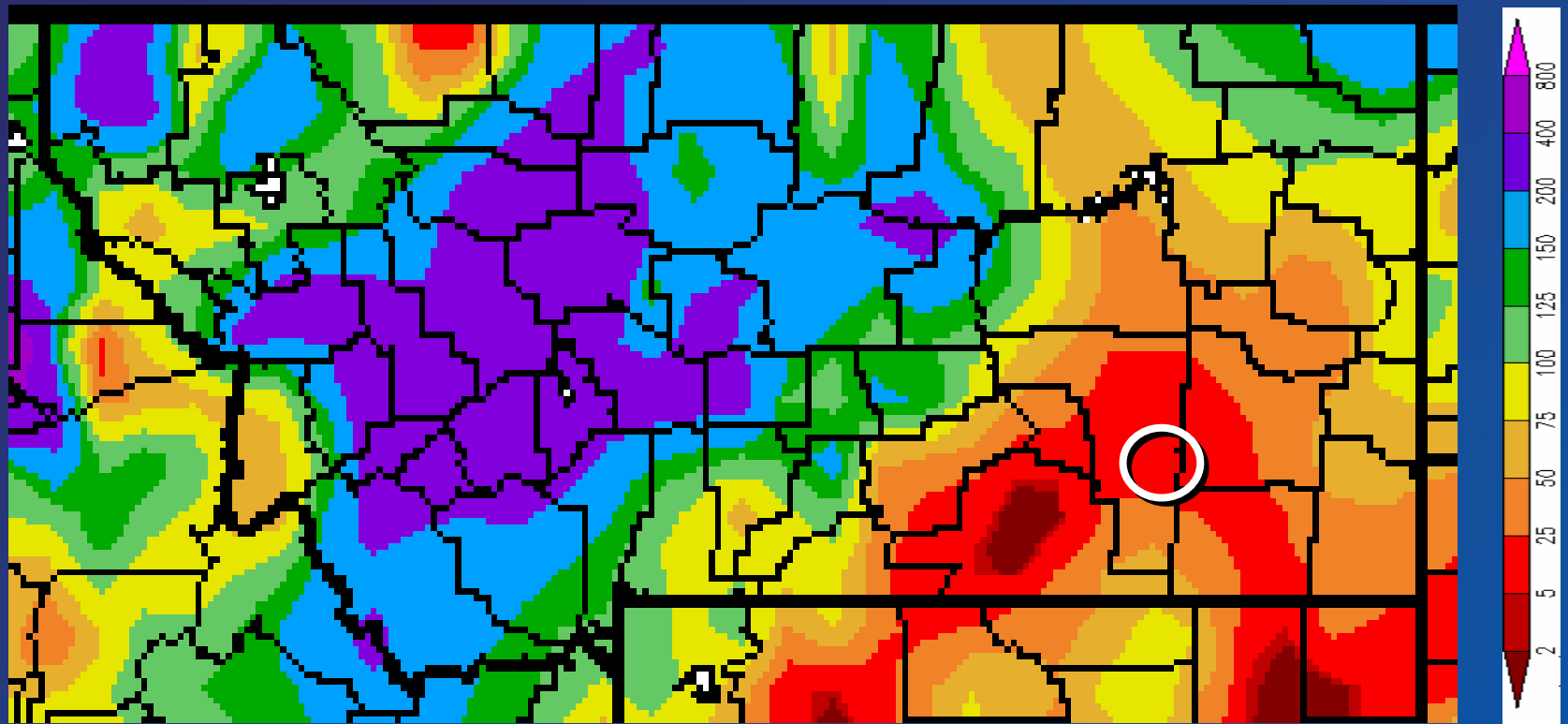


- Temperatures across the state averaged near to above normal
- **Highs**
 - Near normal north
 - 3 to 9 degrees above normal south
- **Lows**
 - Mostly 3 to 6 degrees above normal
 - Near normal northeast



Percent of Average Precipitation

June 1 – 13, 2006



- 💧 **Most of west and central Montana above to well above normal**
 - *125% to 400%*
- 💧 **South central and southeast below to well below normal**
 - *5% to 50% of normal*



June 8, 2006

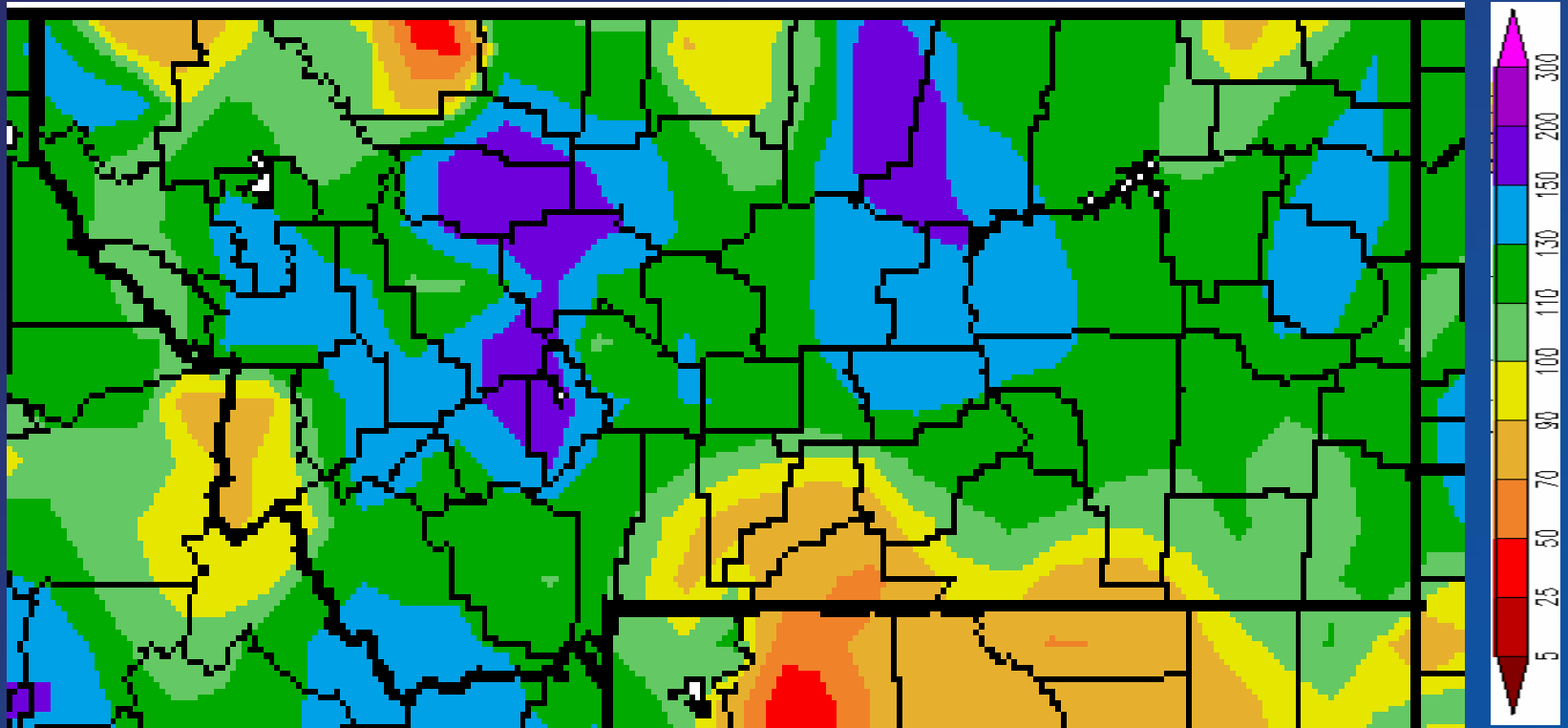
Briscoe Creek near Brandenburg Tributary of Tongue River





Percent of Average Precipitation

October 1 – June 13



- 💧 Preliminary!
- 💧 Area above normal expanded



Precipitation Totals

June and Water Year 2006

	JUNE 1 - 13				WATER YEAR TO DATE			
	ACTUAL PCPN	NRML PCPN	+/- NRML	% OF NRML	ACTUAL PCPN	NRML PCPN	+/- NRML	% OF NRML
WESTERN MONTANA								
BUTTE	2.16	0.94	1.22	230	10.54	7.73	2.81	136
KALISPELL	1.81	1.04	0.77	174	12.92	12.09	0.83	107
MISSOULA	1.78	0.74	1.04	241	13.57	8.14	5.43	167
MULLAN PASS	3.04	1.29	1.75	236	40.10	29.11	10.99	138
SOUTHWEST MONTANA								
BIG SKY	1.36	1.43	-0.07	95	17.93	14.00	3.93	128
BOULDER	2.97	0.91	2.06	326	9.53	6.48	3.05	147
BELGRADE FIELD	1.69	1.17	0.52	144	10.59	9.71	0.88	109
BOZEMAN MSU	1.63	1.38	0.25	118	15.94	13.10	2.84	122
DILLON AIRPORT	1.44	0.82	0.62	176	7.32	5.80	1.52	126
ENNIS	1.74	1.04	0.70	167	9.40	8.42	0.98	112
HELENA	2.42	0.80	1.62	302	10.54	6.59	3.95	160
ROGERS PASS 9 NNE	2.86	1.26	1.60	227	12.40	11.31	1.09	110
TOWNSEND	2.60	0.91	1.69	286	9.59	5.87	3.72	163
W YELLOWSTONE	1.35	1.02	0.33	132	17.57	15.88	1.69	111
WISDOM	1.42	0.78	0.64	182	8.90	7.51	1.39	119



Precipitation Totals

June and Water Year 2006

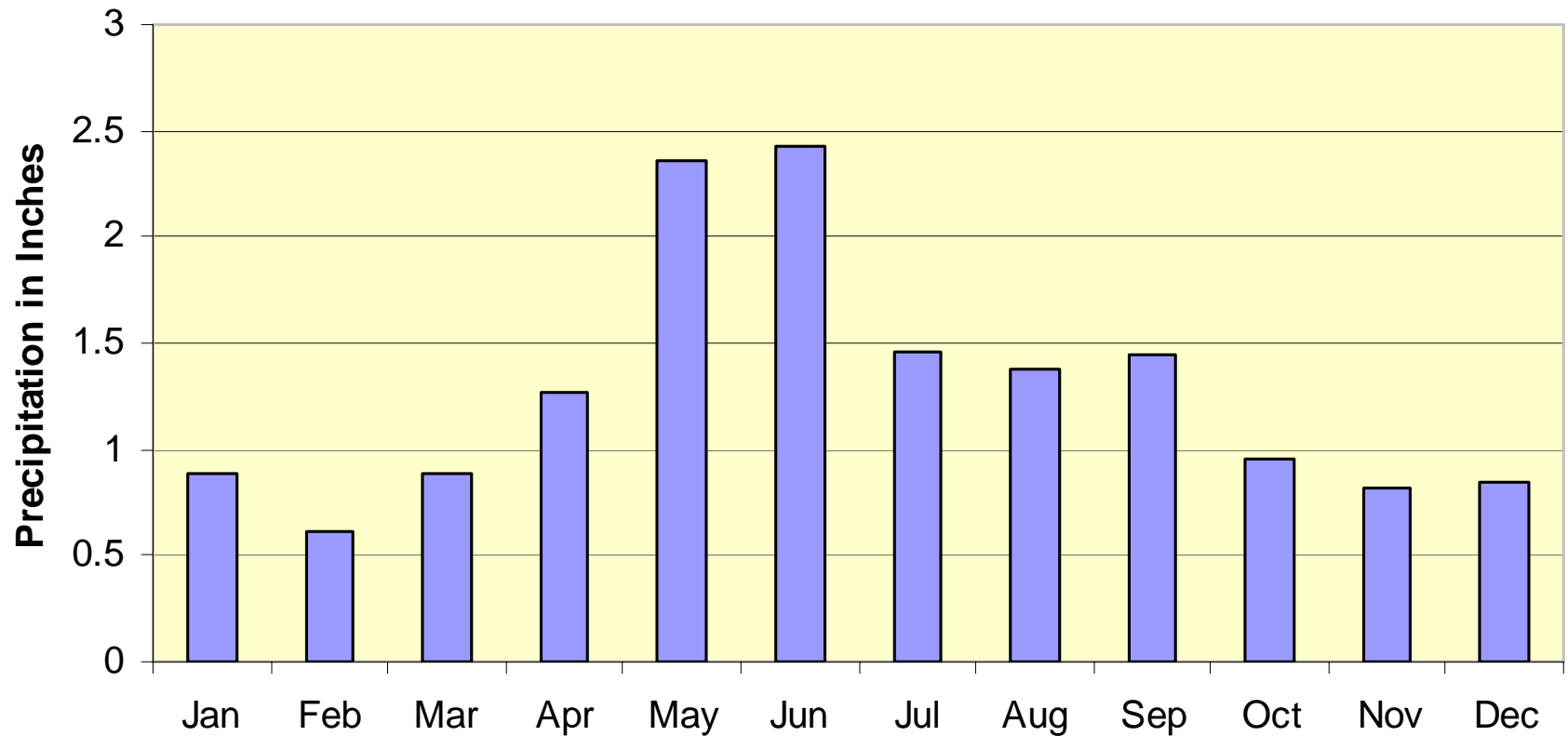
	JUNE 1 - 13				WATER YEAR TO DATE			
	ACTUAL PCPN	NRML PCPN	+/- NRML	% OF NRML	ACTUAL PCPN	NRML PCPN	+/- NRML	% OF NRML
CENTRAL MONTANA								
BILLINGS	0.24	0.92	-0.68	26	9.47	10.28	-0.81	92
CASCADE 20 SSE	3.27	1.17	2.10	279	12.45	8.59	3.86	145
CHINOOK	0.73	1.04	-0.31	70	7.44	7.38	0.06	101
CHOTEAU	2.32	1.03	1.29	225	9.76	5.81	3.95	168
CONRAD	2.32	1.04	1.28	223	5.48	7.19	-1.71	76
FORT ASSINNIBOINE	0.49	1.04	-0.55	47	6.68	7.44	-0.76	90
FORT BENTON	0.85	1.17	-0.32	73	10.02	8.33	1.69	120
GREAT FALLS	3.62	1.07	2.55	338	14.63	9.43	5.20	155
HAVRE	1.50	0.88	0.62	170	7.01	6.70	0.31	105
LIVINGSTON	1.25	1.18	0.07	106	10.15	10.06	0.09	101
LEWISTOWN	1.49	1.35	0.14	110	12.70	10.90	1.80	117
MARTINSDALE 3 NNW	2.35	1.04	1.31	226	10.00	7.75	2.25	129
NEIHART 8 NNW	2.23	1.56	0.67	143	14.68	13.26	1.42	111
SHELBY	1.23	1.03	0.20	119	5.63	5.06	0.57	111
STANFORD	2.59	1.30	1.29	199	11.80	10.12	1.68	117
SWEET GRASS	1.07	1.43	-0.36	75	8.87	7.60	1.27	117
VALIER	2.04	1.23	0.81	166	8.67	6.78	1.89	128
WHITE SULPHUR SPRGS	2.31	1.04	1.27	222	10.09	8.10	1.99	125
EASTERN MONTANA								
GLASGOW	0.62	0.95	-0.33	65	6.66	5.99	0.67	111
MILES CITY	0.24	1.09	-0.85	22	9.41	8.17	1.24	115
WILLISTON	0.87	1.00	-0.13	87	9.82	7.69	2.13	128



Statewide Average Precipitation

June is wettest month

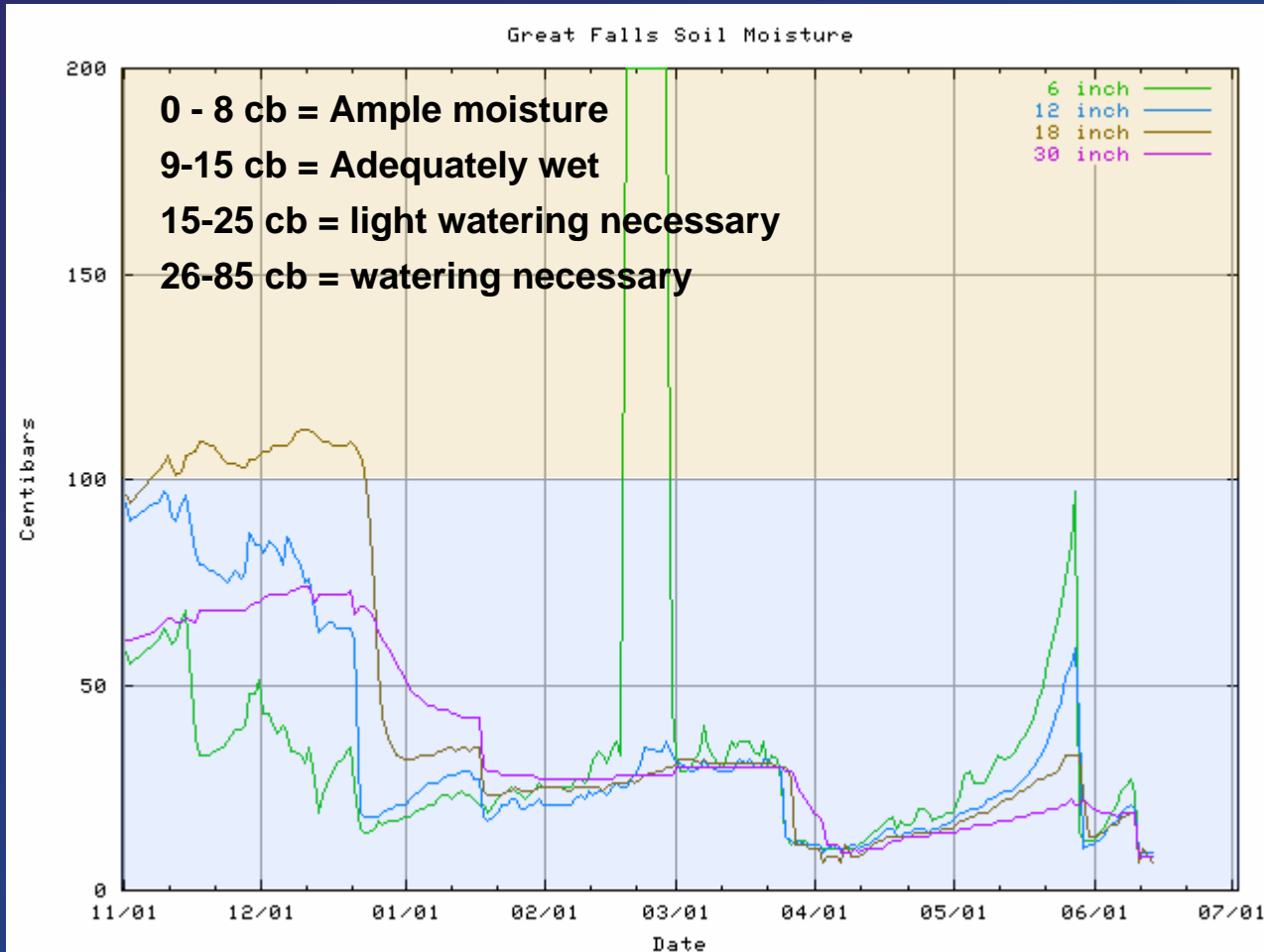
Statewide Average Precip





Great Falls Soil Moisture

Wet... Wet... Wet... Wet.



- At least 'Adequately Wet' at all levels
- Improvement result of storms
 - Over Memorial Day Weekend
 - June 7-11

6" = 11 cb
12" = 10 cb
18" = 7 cb
30" = 8 cb

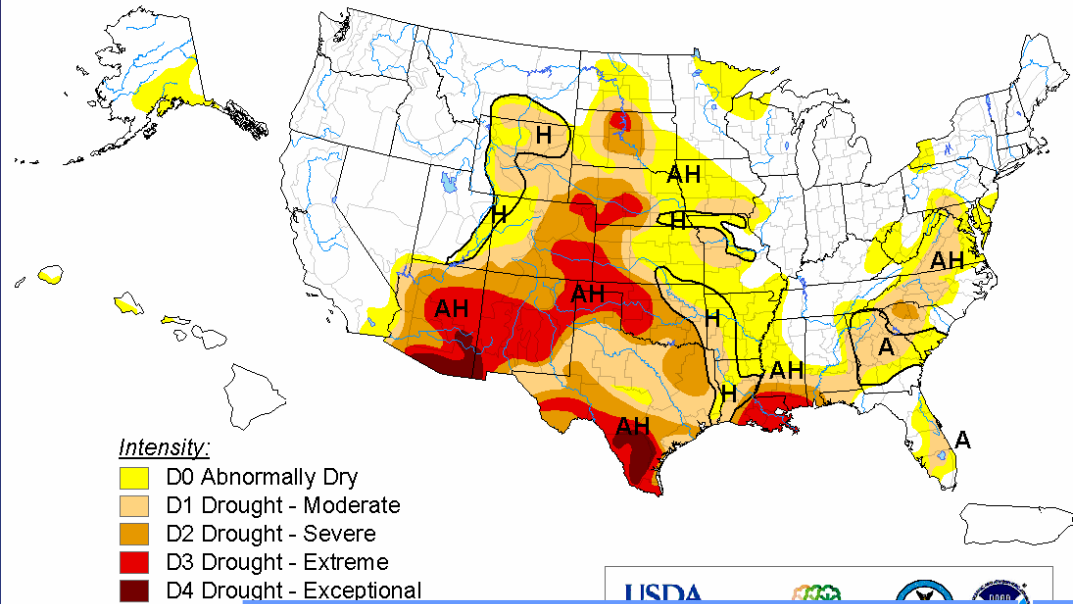


National Drought Monitor

June 13, 2006

U.S. Drought Monitor

June 13, 2006
Valid 8 a.m. EDT



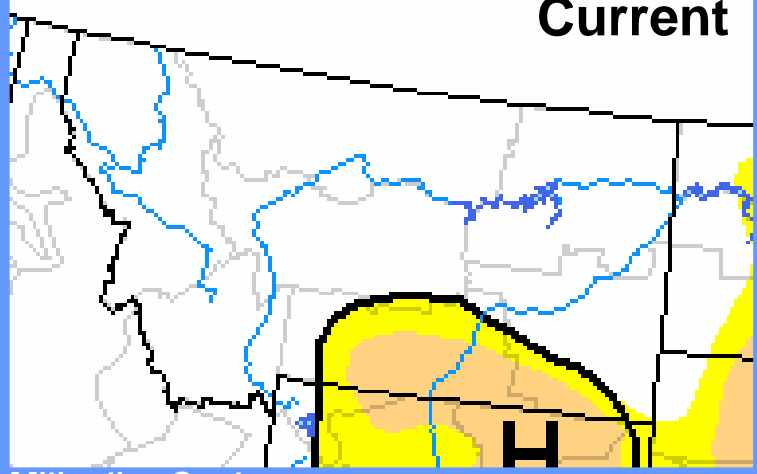
Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

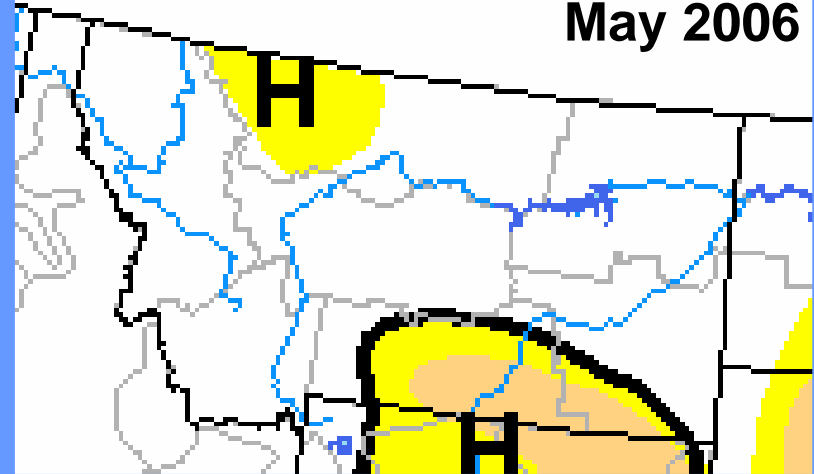
The Drought Monitor for
Local conditions may vary
for forecast statements
<http://droughtmonitor.noaa.gov>

- ‘Moderate Drought’ (D1) in south central Montana
- Some lingering areas of ‘Abnormally Dry’ (D0)
 - South central – southeast
 - Northern Rocky Mountain Front
- Most of Montana cleared of any drought category

Current



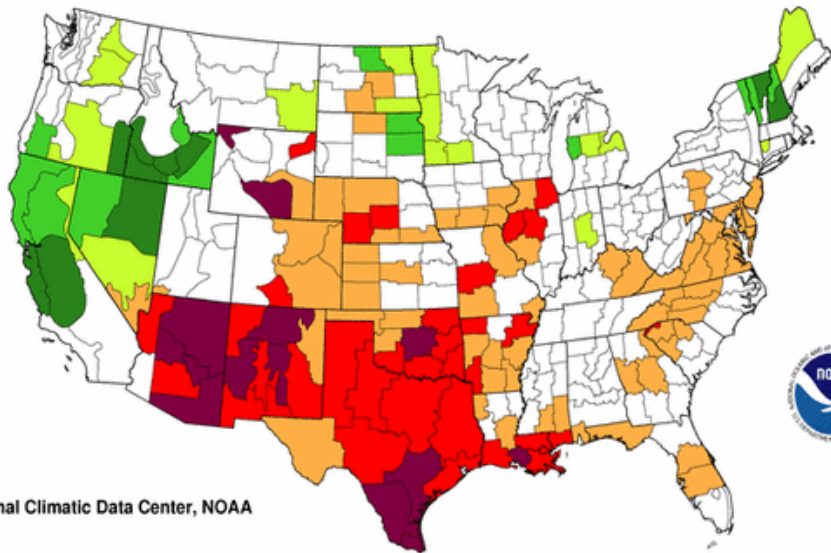
May 2006





Palmer Hydrological Drought Index

May 2006

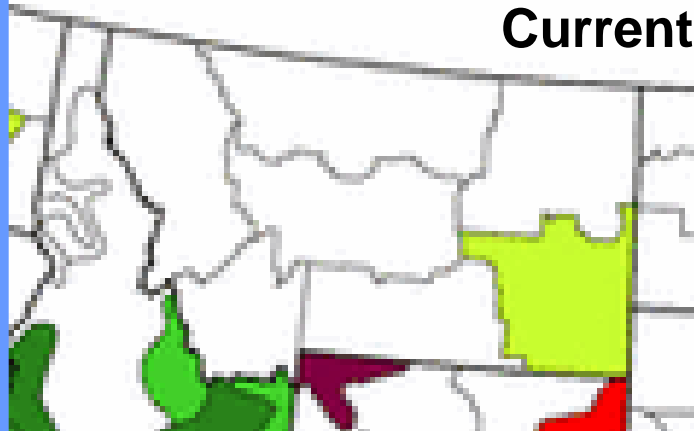


National Climatic Data Center, NOAA

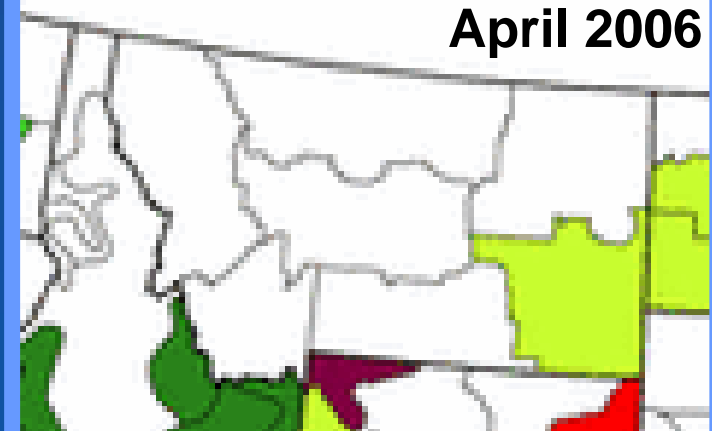


- No climate divisions classified as 'Drought'
- No change from April
- 1 climate division 'Moderately Moist'
 - Southeast
- All other climate divisions 'Mid-Range'

Current



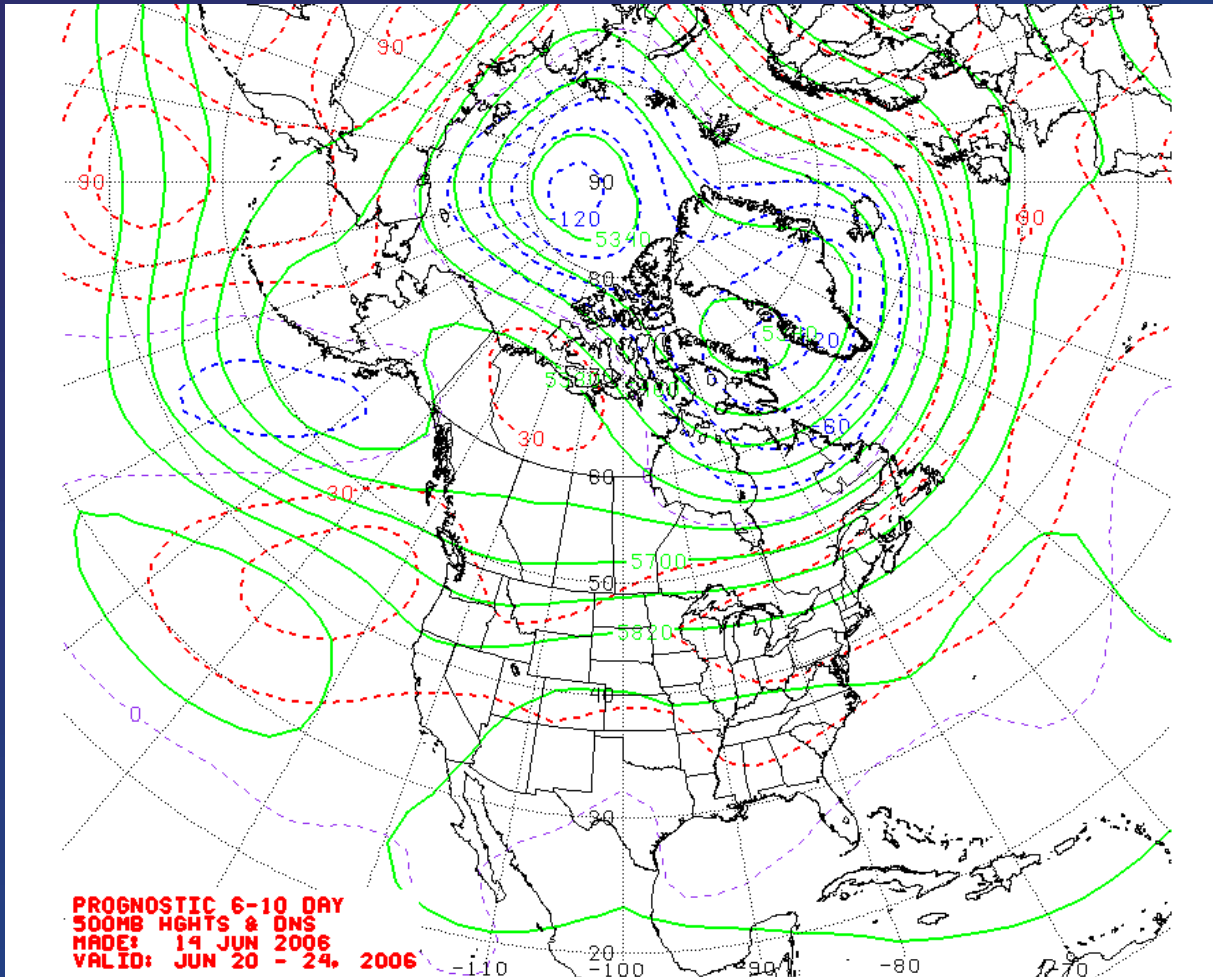
April 2006





6 to 10 Day Outlook

500mb Heights and Anomalies

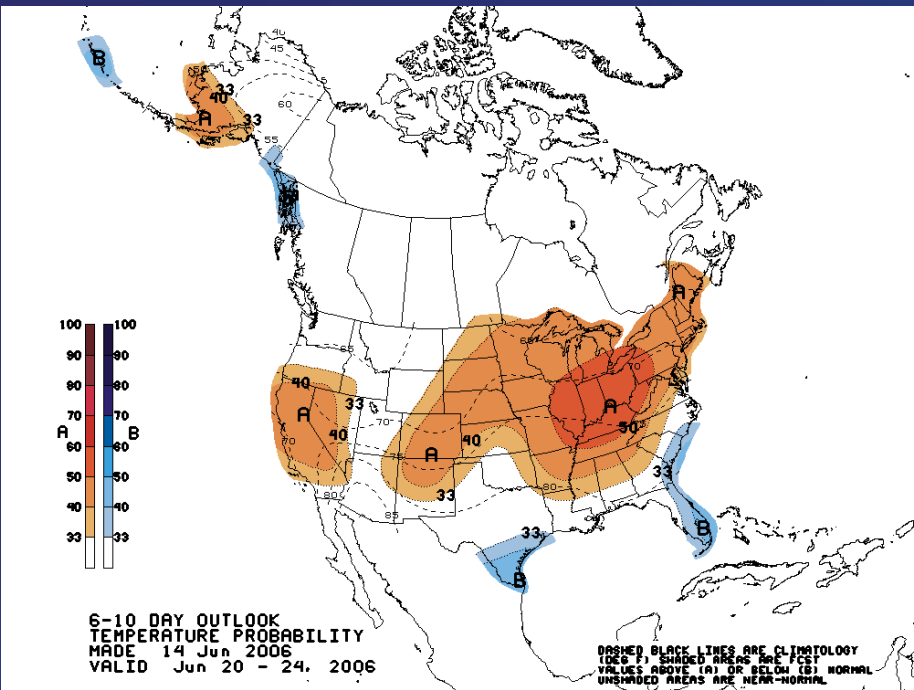


- West to southwest flow with weak low pressure trough to the west
 - Temperatures near seasonal normals
 - Slightly increased chances of precipitation



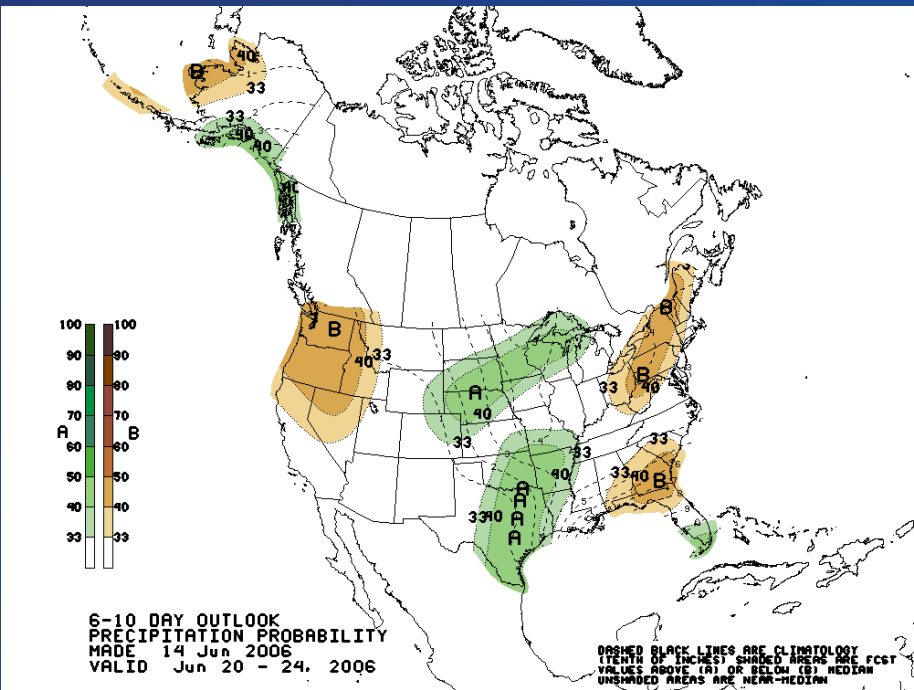
6 to 10 Day Outlook

Temperature



- Equal chances for above, below or near normal temperatures across all of Montana

Precipitation

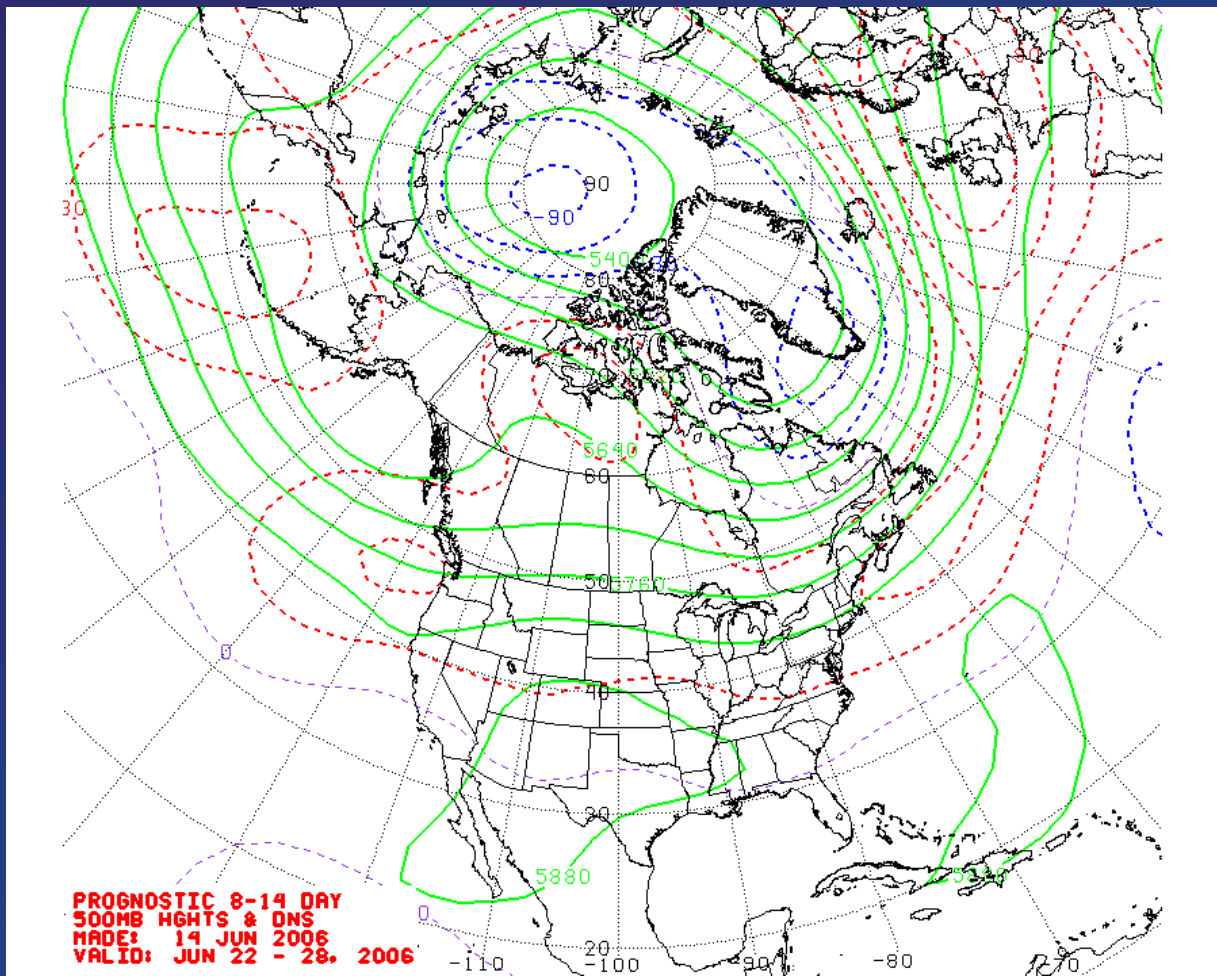


- West – 33% to 40% chance for below normal precipitation
- Central and East – Equal chances for above, below or near normal precipitation



8 to 14 Day Outlook

500mb Heights and Anomalies



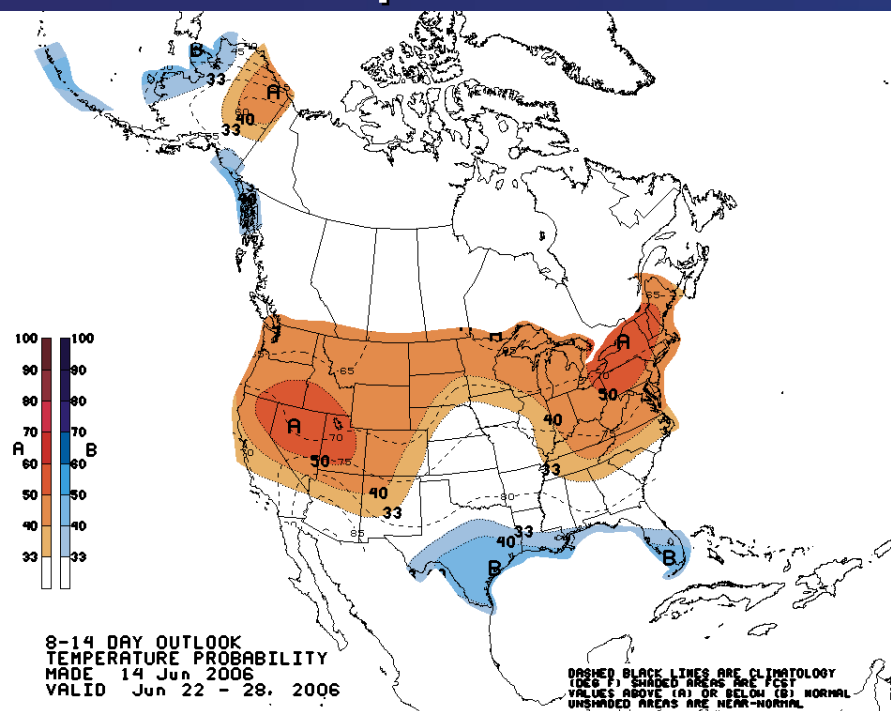
- West to southwest flow with weak high pressure ridge over the state
 - *Temperatures warmer than seasonal normals*
 - *Near normal chances of precipitation*

PROGNOSTIC 8-14 DAY
500MB HGHTS & DNS
MADE: 14 JUN 2006
VALID: JUN 22 - 28, 2006



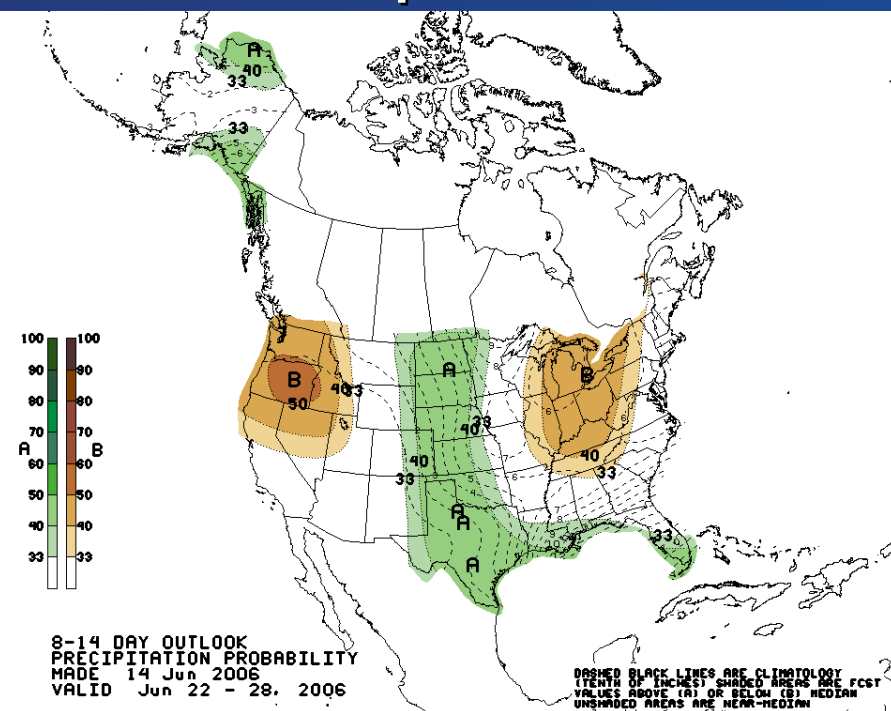
8 to 14 Day Outlook

Temperature



- 40% to 50% chance for above normal temperatures across all of Montana
 - Highs in the 70s
 - Lows in the 40s

Precipitation

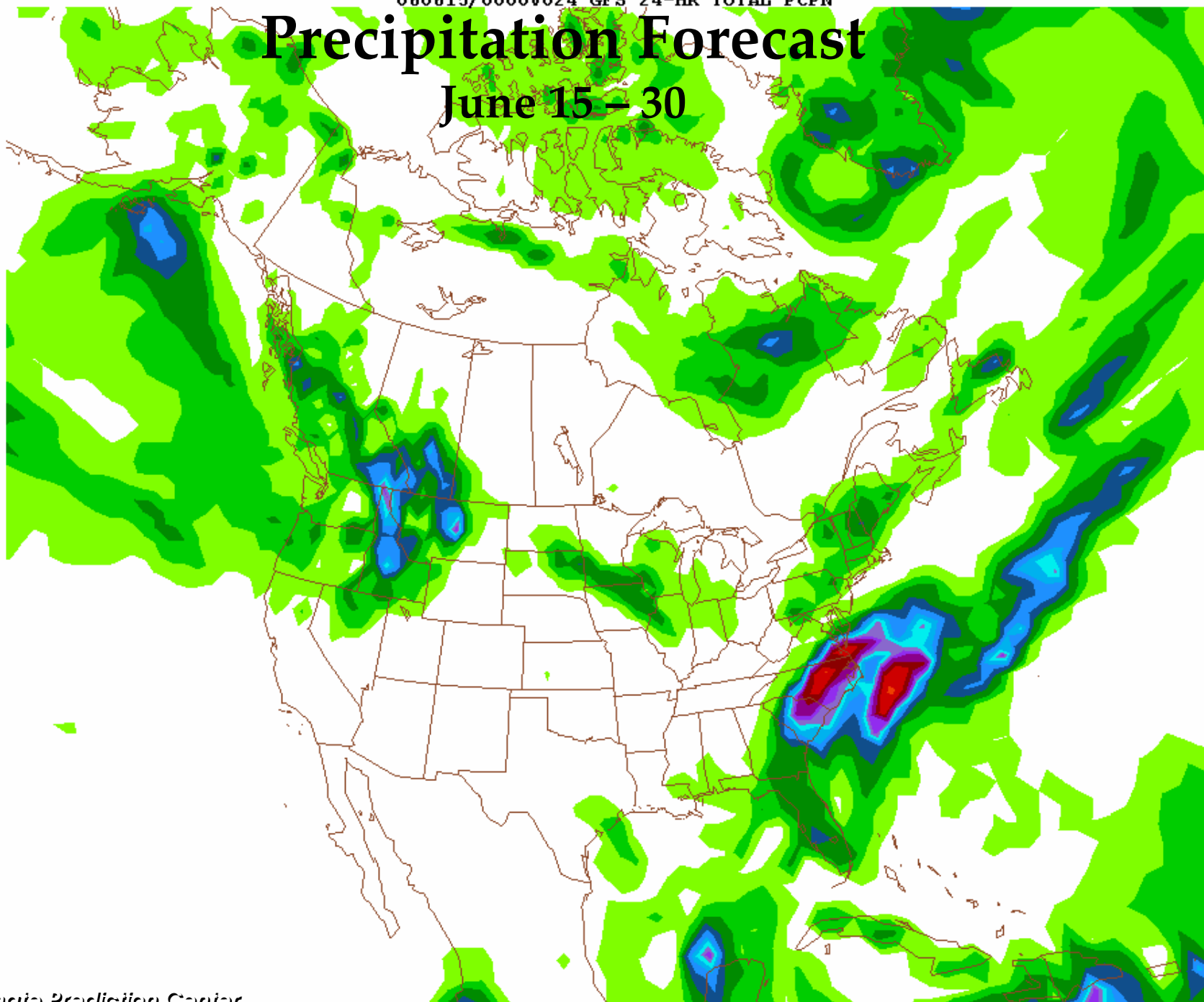
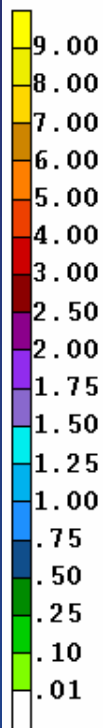


- West – 33% to 40% chance for below normal precipitation
- East – 33% to 40% chance for above normal precipitation
- Normal precipitation ranges for June
 - ~2.00 – 3.00 inches

060615/0000V024 GFS 24-HR TOTAL PCPN

Precipitation Forecast

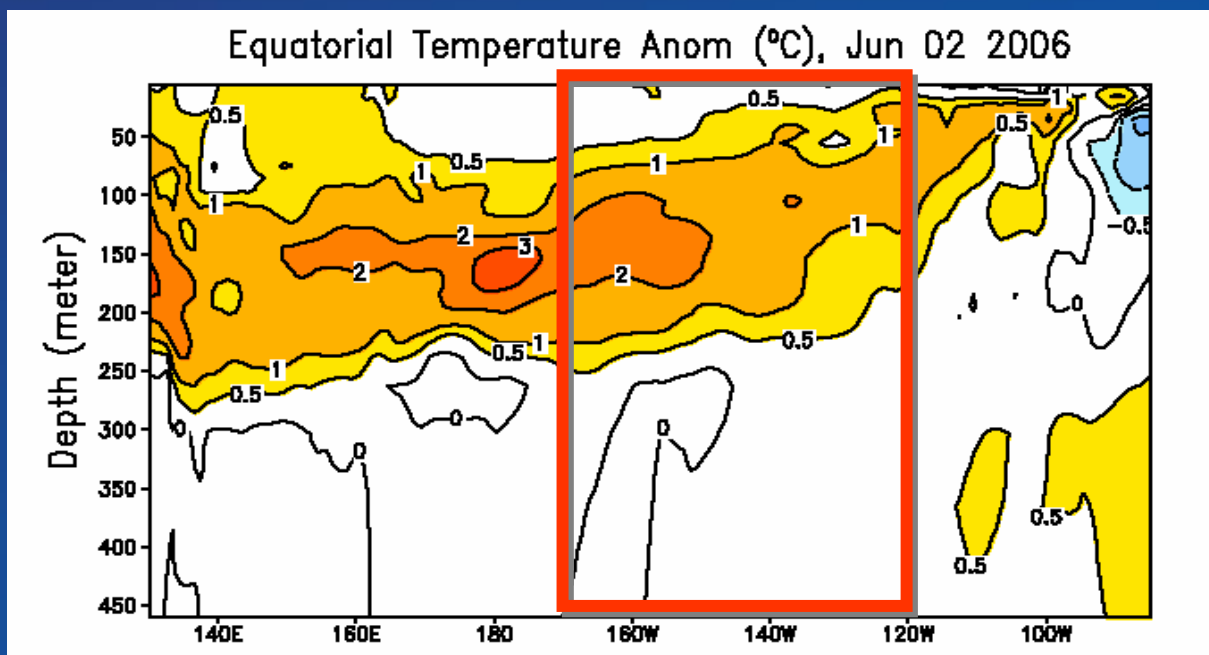
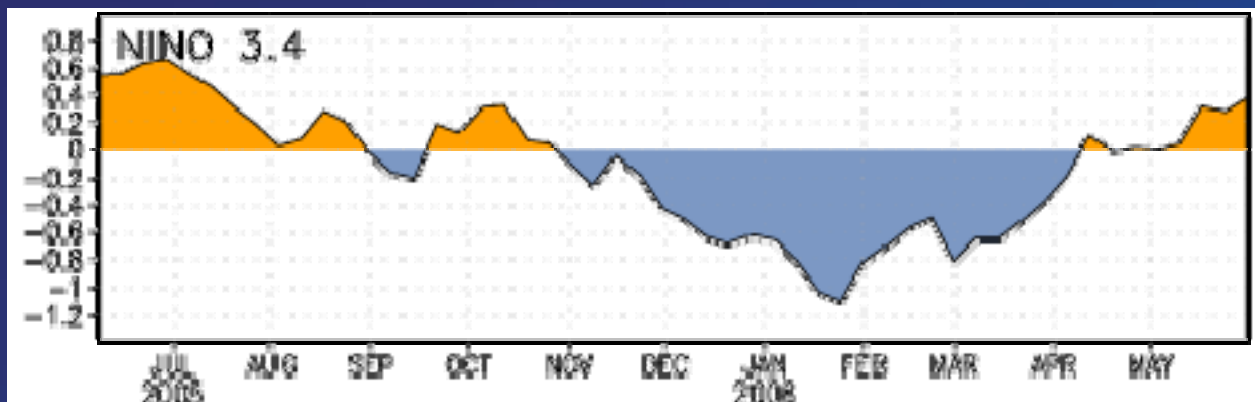
June 15 – 30





Current Status of El Niño/La Niña

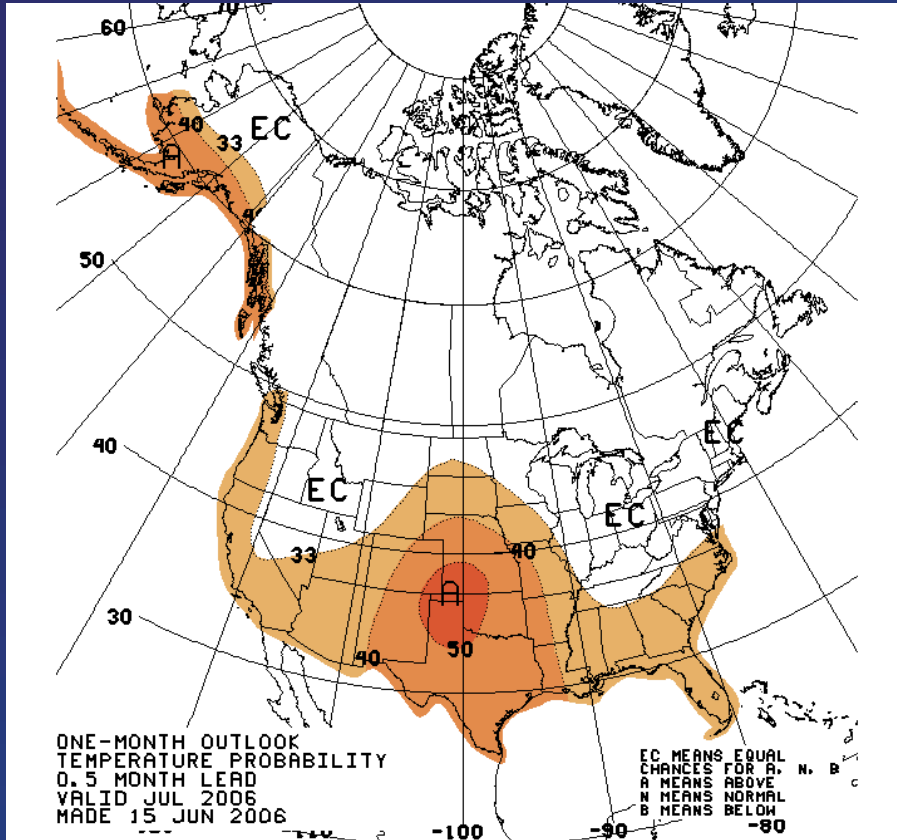
ENSO-neutral conditions expected to prevail next 3 months





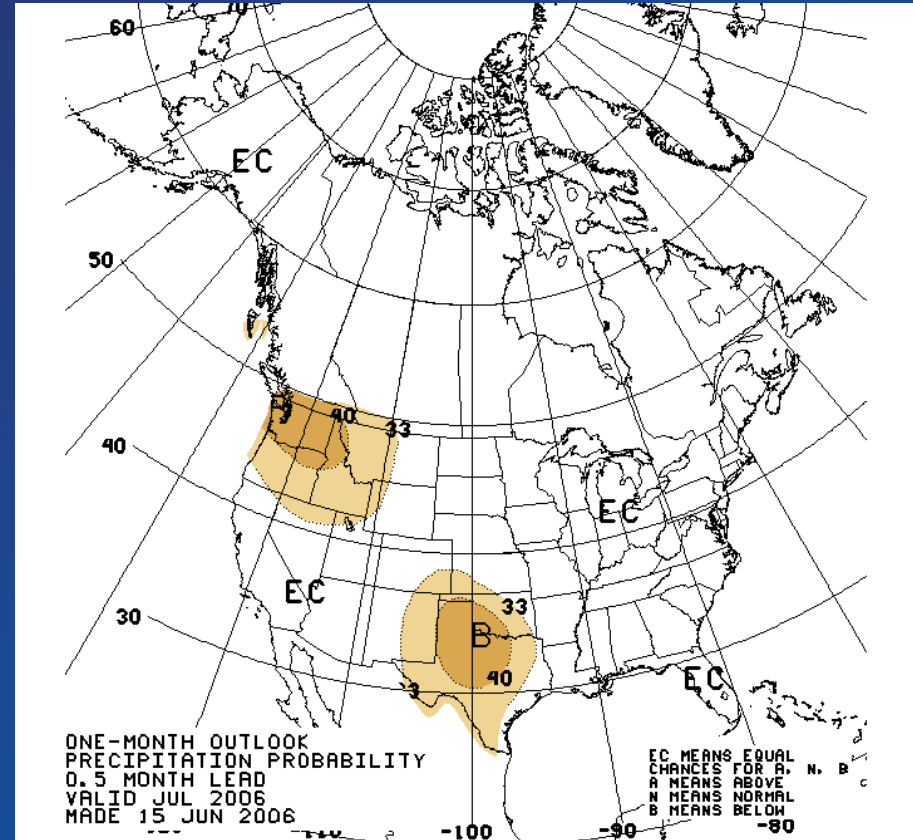
July Outlook

Temperature



- No forecast skill for Montana... therefore equal chances for above... below or near normal temperatures

Precipitation

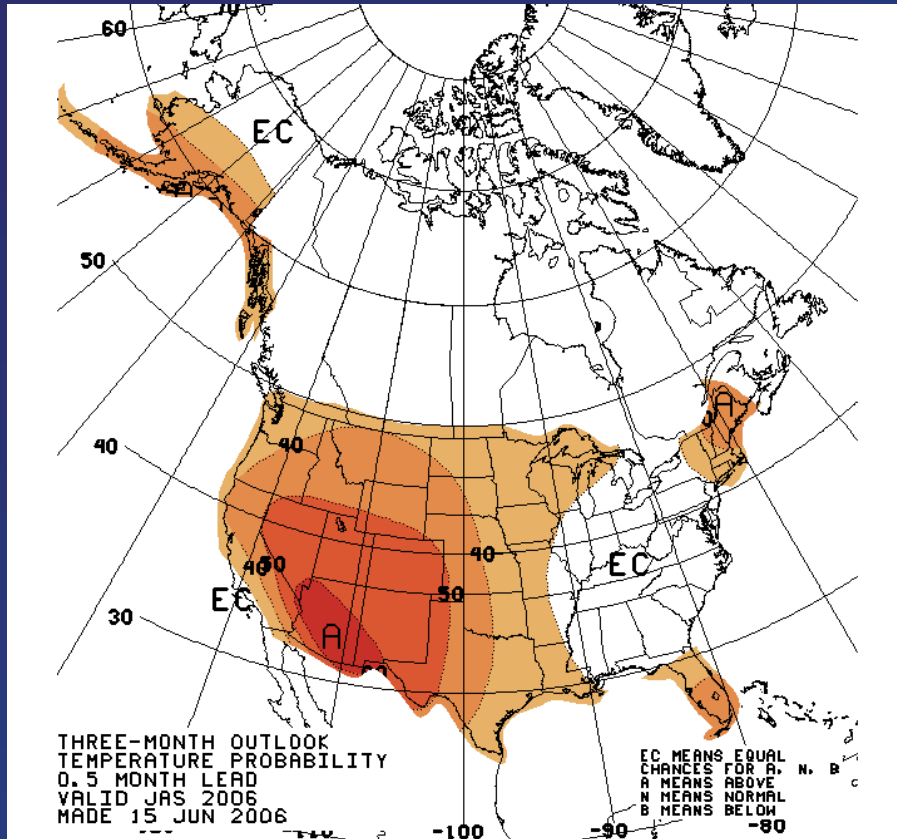


- West –33% to 40% chance for below normal precipitation
- Central and east – No forecast skill... therefore equal chances for above...below or near normal precipitation



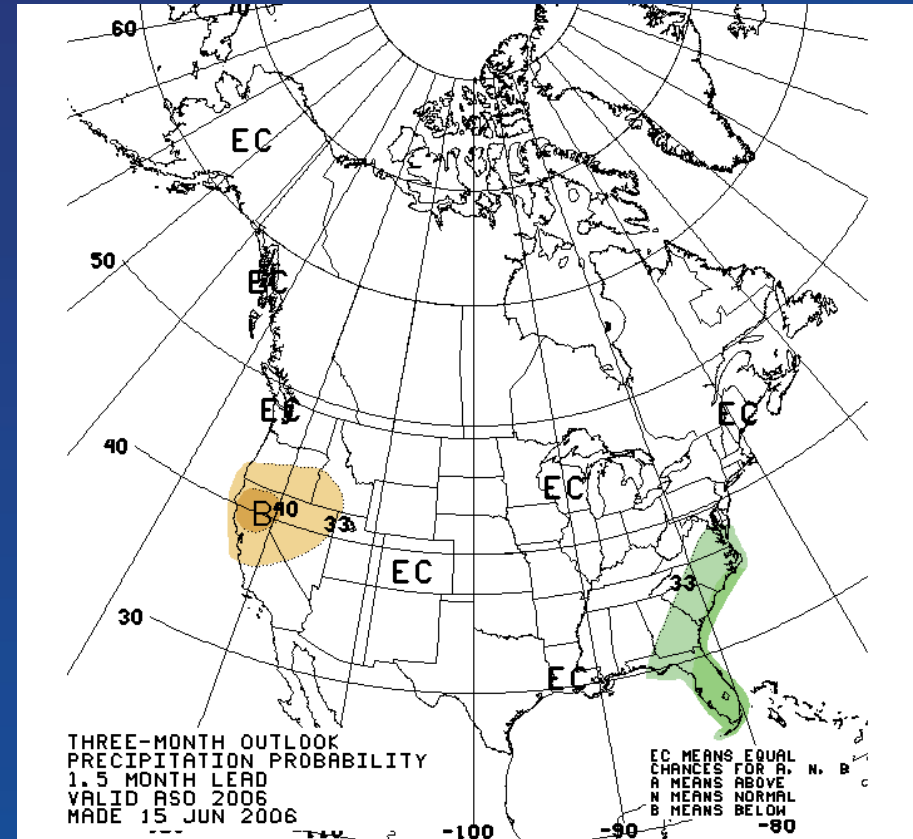
August – October Outlook

Temperature



- 40% to 50% chance for above normal temperatures across all of Montana

Precipitation

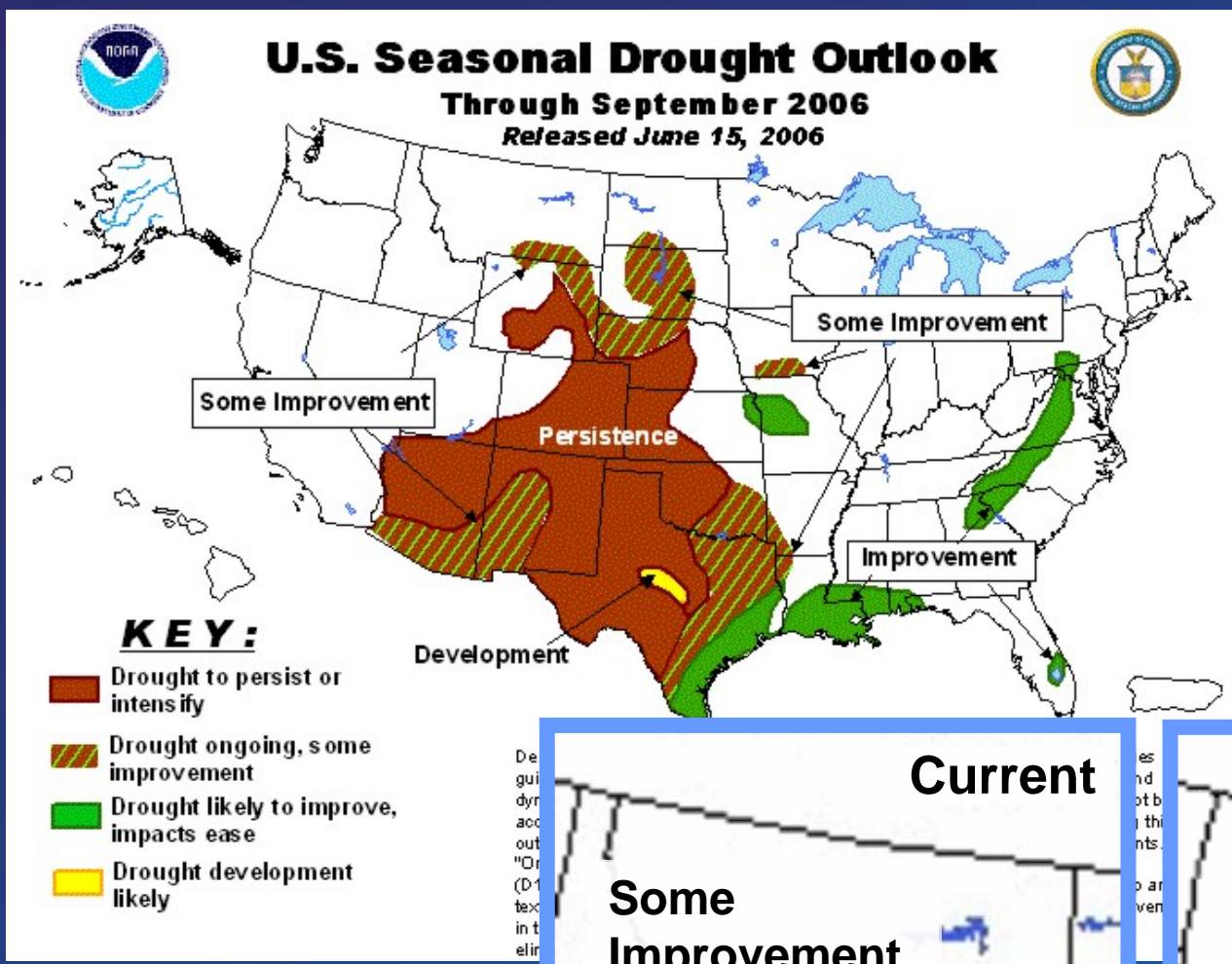


- No forecast skill for Montana ... therefore equal chances for above... below or near normal precipitation

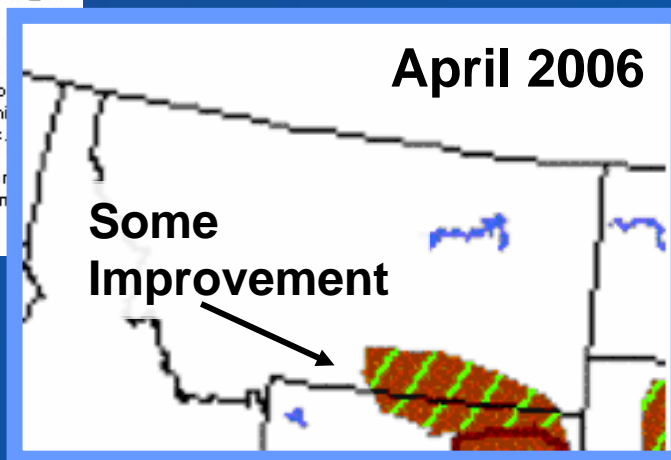
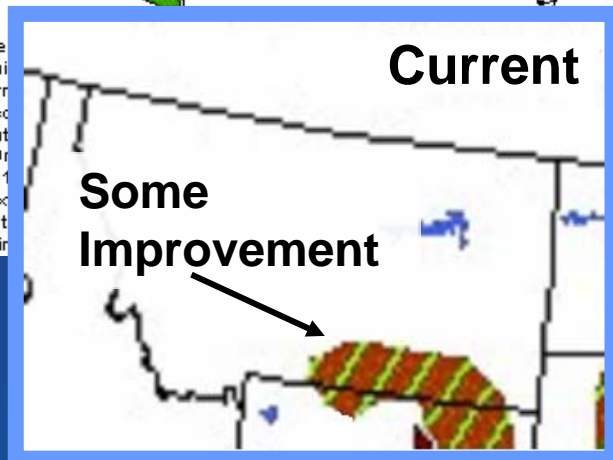


Drought Outlook through September

Issued June 15, 2006



Some improvement expected in south central Montana





In Summary...

- 💧 May ended dry for most of Montana
- 💧 June near to well above normal over west, southwest, north central and central
 - *Near to below normal northeast*
 - *Well below normal south central and southeast*
- 💧 Water year precipitation still near to above normal over much of state at end of May
 - *Some areas above to well above normal with June storms*
- 💧 Still more precipitation in forecast



weather.gov

weather.gov/billings

weather.gov/glasgow

weather.gov/missoula

weather.gov/greatfalls



Tornado near Cut Bank – June 13, 2006